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ABSTRACT

A profile of Nepal is sketched in this paper. Emphasis is placed on the nature, scope, and accomplishments of population activities in the country. Topics and sub-topics include: location and description of the country; population--size, growth patterns, age/sex structure, geographical distribution, topographical obstacles, ethnic and religious composition, literacy, economic status, migration, future trends; population growth and socioeconomic development--relationships to national income, agriculture, and nutrition, education and health services; history of population concerns; population programs--organization, operations, education and information, research and evaluation; commercial distribution of contraceptives; achievements in family planning; and foreign assistance from USAID, IPPF, UNICEF and WHO. Summary statements indicate that dominant among the strengths of the family program in Nepal is its general ability to fit technical problems to Nepali conditions. However, weaknesses are indicated by a friction between nonmedical and medical personnel, the poor condition of supporting infrastructures for family planning and the overdependence on foreign assistance. A map of the country is drawn. (BL)

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# Country Profiles

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# NEPAL

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Although Nepal is geographically small, its ethnic diversity and its communications problems make it, in practical effect, a very large country. There are at least 75 major ethnic groups and 50 languages among the approximately 12 million people. There are less than 805 kilometers (500 miles) of paved roads in the country. The high mountains and deep valleys effectively isolate settlements from one another. About 5 percent of the population is literate. There are 400 doctors in the country, one for each 30,000 persons. Health facilities are few, and according to one estimate, 67 percent of the population die by age 15. The pressure of population density on the land is evident in deforestation, erosion, and silting.

In these conditions, the government has launched a national family planning and maternal and child health program. By establishing district branches, using paramedical officers, and using such forms of transportation as trekking and helicopters, the program is able to make services available even in some remote areas of the country.

## Location and Description

Nepal is an independent kingdom located almost entirely within the Himalayan mountain range, with the exception of a narrow strip on the southern border. Its greatest length is 845 kilometers and its greatest width 226 kilometers. The total land area is 139,900 square kilometers. The country is bordered on the north by China and on the east, south, and west by India. The capital is Kathmandu.

Nepal is divided geographically into three distinct zones: the relatively flat Terai on the southern border; the central hills between 610 and 2,740 meters in elevation; and the Himalayan area, with elevations up to 8,840 meters. Within the central hills lie two principal valleys, Kathmandu and Pokhara, but generally this area consists of high ridges and deep river valleys with terraced farms and small bazaar towns. Climate varies greatly with altitude. The Terai has a subtropical climate and heavy rainfall. In the central hills and middle Himalayan areas, mild summers contrast with cold winters with heavy snowfalls. The entire country is subject to the monsoon.

Each area is populated by a distinctive group. The Terai, a 20-mile wide belt of jungle and swamplands, had few people until recently because of endemic malaria. With the eradication of malaria, and the cutting back of the jungles to make farms, it is now being settled by Indians and by Nepalis from the hills and from Burma. The hill people represent numerous castes and tribal groups, some markedly Indian and some markedly Tibetan, but most of mixed ancestry. Ethnic Tibetans live in the highest areas, generally north of the main Himalayan ridge. Groups of Tibetans who have escaped from Chinese rule in their homeland also live in the high Himalayas and the middle hills.

Nepal's rivers generally run to the south and most trade routes are north-south as well. Until recently, rivers discouraged communication and prevented trade, but bridge construction throughout the country may open up new opportunities.

Farming is the dominant economic activity. In the high mountain area, which is sparsely populated, the main occupation is the raising of chaunries, a cross between yak and cattle, for the production of butter. In the central hills, the fields are terraced shelves, barely large enough for oxen and plow to turn around in. In these fields, the farmers grow in turn rice, wheat, corn, and usually some vegetables. Cereal crops vary with altitude. The cutting of Terai jungles has turned the Terai economy to the farming of sugar cane, jute, maize, wheat, and rice.

Since February 1972 the country has been under the leadership of King Birendra. With a revolution in 1950, a rigid feudal order gave way to a democratic experiment in government. At first a western model was tried. From this evolved in 1961, Nepal's unique partyless Panchayat

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system. Here, under the leadership of a strong monarch, village self-government councils (Panchayats) form the lowest level of government. Councilmen elect members to a higher district Panchayat, which in turn elects members to a zonal assembly, and this body elects members to the national Panchayat.

Data on Nepal are uniformly weak for several reasons: Collection procedures are recent and still being refined. Resources are scarce; hence program operations take precedence over program monitoring. And the extreme geography of the country hinders data gathering.

## Population

### Size

*Total population.* Population size in Nepal is not known with certainty. Preliminary reports from the 1971 census indicate 11,290,000 people. The 1961 census estimated 9,413,000 people. Both are probably underenumerations, since lack of transportation and of a communication infrastructure, plus inability to control data accuracy almost certainly resulted for both censuses in missing not only people but also complete villages. Earlier censuses exist but they are even less reliable.

In 1956–1966 a national sample health survey was conducted by the Department of Health of His Majesty's Government, the University of Hawaii, and the Dooley Foundation. Extrapolating from these data, the estimated 1971 population is 12,200,000. This was the first national sample survey done in Nepal. Not all sampling sites were visited; therefore, this estimate is also subject to error.

For present purposes, a population estimate of somewhat less than 12 million is realistic. (Data from a more accurate 1971 census should be available by mid-1972.)

*Household data.* Number of households and average size of households are meaningless figures for Nepal. One reason is the lack of definition of households. Among Nepalis, the extended family is a strong societal norm. However, it is not a norm that can be easily defined. Often families own several houses, scattered in different areas. Members shuttle from house to house and mix within the greater family in differing ways. A second reason for difficulty in compiling data on households is the societal heterogeneity. Even if the extended family is worked out for one ethnic group, it will not hold constant for others. To illustrate, consider the husband-wife relationship: usually Nepalis are monogamous, but polygamy is common, and in some areas polyandry is also practiced.

*Age at marriage.* The biological and social events of marriage do not occur simultaneously in Nepal. The social event precedes the biological. Often a couple are married while in their early teens, but they do not begin living together until their late teens. By age 14, 65 percent of the girls are socially married, but only 10 percent have had their first child, although biological capability is present, since 50 percent have begun menstruation. By age 18, however, at least 95 percent have their first child. Virtually all marriages occur before the woman is 24 (Worth and Shah, 1969, p. 26).

Marriage ceremonies and patterns of family living vary greatly among ethnic groups. In some groups, a certain age is considered optimal; in others, another age. Women's aspirations vary too. Higher educational aspirations in the capital, Kathmandu, cause marriage to be later there than in other areas. An arranged marriage is the norm. Its time and hence bridal age are determined astrologically.

### Growth Patterns

Only estimates of vital statistics are available for Nepal. Extrapolating from the 1961 census and the 1963 Survey of Population conducted by the Central Bureau of Statistics on a sample basis over part of Nepal, the Central Bureau of Statistics (CBS) concludes the 1971 crude birth rate to be 40 per 1,000 per year and the crude death rate to be 20 per 1,000. The 1965–1966 National Health Survey (NHS), however, concluded the crude birth rate to be between 50 and 54 per 1,000 and the death rate to be in the neighborhood of 27 per 1,000. These two sets of estimates give annual growth rates of 2.0 percent and 2.7 percent respectively. Considering CBS and NHS data in the light of experience in the family planning program, probable estimates are about 48 for the crude birth rate and about 24 for the crude death rate, providing an approximate growth rate of 2.4 percent. Detailed mortality data are available only from the NHS. They estimate 37 percent of all deaths to be among infants, 56 percent before age five, and 67 percent before age 15 (Worth and Shah, 1969, p. 26). These mortality data contradict the official CBS estimate of an average life expectancy in Nepal of 40



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years: based on the NHS data, average life expectancy is about 20 years. This extreme discrepancy results from differing data-gathering techniques. The CBS estimate extrapolates from the 1961 census. The NHS figure is based on age-specific mortality data from a national sample survey.

Long-term growth patterns for Nepal are not accurately known since there has been no systematic record keeping. However, population apparently started to increase early in this century. Since improved health practices are recent in Nepal, they were almost certainly not a major factor in this early population growth.

### Age and Sex Structure

The 1961 census and the NHS are fairly consistent with regard to age data. Both indicate that 40 percent of the population are below age 15, 50 percent between 15 and 49, and about 10 percent over 49. Sex ratio data are not sufficiently precise for meaningful analysis.

### Geographical Distribution

Only 10 percent of the population live in the high Himalayas, at altitudes over 2,740 meters. Sixty percent of the population live in the middle hills and 30 percent in the Terai.

An important indicator of population density in Nepal is persons per cultivatable square mile of land. Eighty-seven percent of Nepal's 139,900 square kilometers does not qualify as arable under current agricultural methods. Ninety-five percent of the population is agrarian. If the 13 percent (18,130 square kilometers) arable land is separated into two groups, southern Terai jungles (10,400 square kilometers) and hill (7,700 square kilometers) and population density per cultivated square mile is calculated for each area, the hills are found to be four times as densely populated as the Terai. However, the population density in the Terai is increasing, with the control of malaria and the cutting back of the jungle. Forest areas are diminishing daily, and the United Nations forestry groups estimate that the Terai will be all farmland by 1980.

Sixteen towns have a population greater than 10,000 and are, therefore, defined as urban (Kathmandu, Patan, and Bhaktapur, all in the Kathmandu valley, and Hetauda, Birgunj, Bhairawa, Palpa, Pokhara, Butwal, Nepalgunj, Biratnagar, Dharan, Rajbiraj, Illam, Bhadrapur and Janakpur). Kathmandu, the capital, is the largest with about 125,000 people in the central city. The principal economic function of urban centers—as well as lesser towns in Nepal—is as bazaars for surrounding villages (Gurung, 1970, p.10).

### Topographic Obstacles

The Himalayas greatly limit the nature of health and family planning services that are possible in Nepal. The mountains make road building difficult. They make airplane travel hazardous and landing fields scarce. Frequent landslides wipe out trails and often cut valleys off from outside contact. The physical difficulty of climbing and descending passes discourages a regular flow of contact among settlements. There are less than 805 kilometers of paved roads in the entire country. Because of these and similar factors, communications are incomplete and the support of district programs is sporadic.

### Ethnic and Religious Composition

There are at least 75 major ethnic groups and 50 languages in Nepal. Each ethnic group has its own language, customs, and living styles. Some ethnic groups have international renown; Sherpas, for their mountaineering; Rais, Limbus, Gurungs and Tamangs, as Gurkha soldiers. Traditionally these groups cooperated with one another but did not intermarry or intermingle culturally and socially. As traditional ways fade, these barriers become less firm, but ethnic heterogeneity continues to create a major communication obstacle. Members of differing tribal groups mix very little and speak different languages. Among women the knowledge of a second language is less common than among men.

Officially, Nepal is a Hindu kingdom. However, it is the birthplace of Buddha, and generally the Hindu superstructure has many Buddhist modifications. Orthodox Hinduism is most prevalent among Brahmins, who are found throughout the country. Tibetan Buddhism is common along the northern border. Other ethnic groups identify themselves with one religion or the other, but their religious practices deviate significantly from the orthodox norms.

### Literacy

Literacy in Nepal is low. Of the total population, about 5 percent are functionally literate and somewhat more than 10 percent can read and write their names. Of the school age population (7–18 years), 30 percent (or about 500,000 children) are reportedly in school and therefore are presumed literate (*New Education Plan*, 1971).

### Economic Status

Average per capita GDP (gross domestic product divided by population) in 1970 was US$70 per year. This figure conceals a highly uneven distribution of GDP: much of the population—about 85 percent—are subsistence farmers with no cash income. About 10 percent of the population are landlord-farmers, and the remaining 5 percent are in business, industry, or civil service.

### Migration

Migration is an important demographic phenomenon in Nepal. Emigration is generally temporary, and involves primarily the Gurkha soldiers who leave to join the British and Indian armies. They return, sometimes after many years, bringing back capital and foreign wares. Secondarily, Nepalis also migrate to Indian cities to work as watchmen. Over the past decade at least 80,000 Nepalis have emigrated to India each year and at least 60,000 have returned annually after one to five years' absence.

Immigration is of three types. As malaria is controlled in the Terai, Indians are moving in from more densely populated neighboring provinces and establishing shops in the towns and tenant farms on leveled jungle areas. The second major immigration is of Nepalis who served as soldiers in Burma during World War II. Following the war, they settled in Burma, but because of recent political problems they are returning to Nepal. By and large, they are self-supporting and easily assimilated. The third immigrant group is Tibetan refugees. With Chinese occupation and subsequent persecution of native Tibetans, many have fled to Nepal. They arrive with few resources and tend to have

more difficulty than other immigrants in establishing themselves.

As mentioned earlier, internal migration from the densely populated hills to the Terai has become a significant factor in population patterns. This frontier can absorb surplus population from the hills for perhaps another decade before overcrowding will result in major structural changes in land ownership and job opportunities.

### Future Trends

Demographic trends in Nepal are difficult to predict because of the discrepancies between the two sources of data. Using CBS data, the population will be 13,501,000 by 1980. Using NHS data it will be 15,000,000.

A longer-range prediction was made at the Seminar on Population and Development in July 1971. They assumed the present gross reproduction rate to be 2.5 (equal to a crude birth rate of about 40 per thousand). They predicted a population of about 22.0 million by the year 2001 if the fertility rate remains constant, and a population of about 16.7 million if the fertility rate could be gradually halved over the next 30 years.

## Population Growth and Socioeconomic Development

### Relationship to National Income

Annual gross domestic product (GDP) in 1970 was $800,000,000 and the annual rate of growth was 2.2 percent (compared with a population growth rate of 2.4 percent). Sixty-nine percent of GDP in 1970 derived from agriculture; 8 percent from ownership of dwellings; 7 percent from cottage industries; 4 percent from wholesale and retail trade; 4 percent from services; 2 percent from manufacturing; 2 percent from construction; 2 percent from transport and communications; 1 percent from financial institutions; and 1 percent from public administration and defense.

### Relationship to Agriculture

Agriculture, with 95 percent of the population and 69 percent of current national income, is the single most important sector of the economy. Improving land productivity has the greatest potential for increasing agricultural production. Given present agricultural technology, agricultural production in the Terai could at least double by 1990. In the hills the technology is not yet available to increase production.

The nonagricultural sector of national income also has growth potential. The area for such growth is hard to anticipate as the present economy is trying numerous options hoping for success. Tourism and hydroelectricity are two of the more promising options. At present Nepal exports food grains to India. Her other major export is jute products.

### Relationship to Nutrition

During recent years the food intake per capita apparently has not increased. Nutritional deficiencies are primarily in vitamin A and in iodine (Worth and Shah, 1969, ch. 5). The latter results in a high incidence of goiter and occasional cretinism. If the people of Nepal are to enjoy a 2.0 percent annual improvement in diet, measured in cereal production requirements, the cereal output will have to quadruple by the year 2000 even with a minimum population increase.

### Education and Health

*Education.* Of the school-age population, presently 30 percent, about 500,000 children, is in school. By 1995, the school-age population will more than double; to keep facilities and teachers growing at a faster pace will be difficult. Educational attrition is considerable for all levels. Output of college graduates is already beyond demand, creating substantial frustration among the educated unemployed. At other educational levels output is less than demand: the Seminar on Population and Development estimated that achievement of 100 percent school enrollments by the end of this century would require an elevenfold increase in attending children if fertility remains unchanged and a sevenfold increase if fertility were slowly halved.

In the face of this perhaps impossible level of demand, the government, as part of a greater educational reform, has decided that more children shall have fewer years of education. Primary school has been changed from a six-year to a three-year curriculum (*New Education Plan*, 1971).

*Health.* Health services in Nepal are neither adequate nor evenly distributed. The kingdom has less than 400 doctors, more than 80 percent of whom are in HMG service, and about a third of these are in Kathmandu Valley (which has about half a million people, not quite 5 percent of the total population). The general population has traditional cures for most health problems. When these fail the villager goes to the nearest pharmacy, which provides free diagnostic and prescriptive services as an incentive for purchasing medicines. If this fails or is inconvenient, the villager visits the government doctor or paramedical or often a foreign mission hospital. As government medical facilities improve and become more common, their services are more utilized. To achieve widespread medical care, however, the government depends increasingly upon paramedicals.

Critical factors regarding both education and health programs are inadequate training facilities and Nepalese geography, which hinders the establishment and support of rural programs.

## History of Population Concerns

Concern with population growth is recent in Nepal. In 1958 the Nepal Family Planning Association (FPA) was formed by a few concerned Nepalis and several foreign enthusiasts. In 1965 the governmental Family Planning and Maternal Child Health (FP/MCH) Project began. This program is gaining momentum, as support for it continues to grow. Yearly, fewer people contend that increased manpower is necessary for the national economy and defense. In the past few years active cooperation has developed with a few sectors of the government outside the family planning program.

Religious opposition to family planning in Nepal has never been appreciable. Buddhists and Hindus have few objections to contraception or to regulating population growth. However, especially Hindus feel a need for one if not more sons for economic, normative, and religious reasons. Among Buddhists, the desire for a son is primarily economic, to provide additional labor in peak agricultural seasons and social security in old age.

Induced abortion is banned in Nepal. Fragmentary evidence indicates that although there is some inci-

dence in urban areas it is rare among villagers. A willingness to legalize abortion is growing, but many opponents fear that legalization would result in more abortions performed under primitive conditions by untrained persons.

## Population Programs

Family planning activity in Nepal is through two independent organizations: the private Family Planning Association (FPA) founded in 1958 and funded by the International Planned Parenthood Federation (IPPF), and the official government Family Planning and Maternal and Child Health Project (FP/MCH Project) started in 1965. These agencies differ in structure, approach, and activities. In its early years, the FPA established three family planning clinics in Kathmandu Valley. These continue to operate. The FPA membership, currently slightly less than 500, is growing steadily. A program is underway to expand operations outside Kathmandu Valley, although to date efforts to extend operations are restricted to occasional vasectomy camps.

Using existing health institutions in Kathmandu Valley, the FP/MCH Project spent its first several years operationally integrating MCH and family planning. During this time, it began training paramedicals and posting them in districts outside Kathmandu Valley. Then in January 1970 the project set up 25 district offices with staff and supplies.

An integrated FP and MCH program entails considerably more training of staff and more complicated logistics to supply clinics than would separate programs. However, integration is mandatory politically. With Nepal's high child mortality, politicians feel a greater obligation toward providing services for present children than toward preventing future children. Politicians see family planning as the most capable network to meet this political need. This is the present rationale; historically, family planning grew from being just one of several MCH services. Field evidence suggests such liaison to be synergistic. While Family Planning offers Maternal/Child Health an infrastructure, MCH develops rapport for family planning among MCH clients, wins their trust, and provides an excellent contact point for family planning motivation.

Because the FP/MCH Project is now by far the dominant family planning organization in Nepal, the following discussion focuses on it.

### Organization

Since February 1968, the FP/MCH Project has been a semiautonomous organization within the Ministry of Health. (The Director General of Health Services is chairman of its board.) The FP/MCH Board sets project policy and is responsible for project activities. The board consists of a chairman, a secretary (an ex-officio member as project chief), and one representative each from the Ministries of Finance, Health, and Education.

In charge of program execution are five technical sections (supply and procurement, evaluation and research, education and information, training, and central clinic) and two administrative sections (finance and administration).

In 1971 the family planning program had 25 district offices. In 1972 it will have 30, and in 1973, 40 out of a total of 75 political districts in Nepal. In 1971, 87 FP/MCH centers were operated nationwide. There will be 110 in 1972 and 150 in 1973.

A district office is an administrative office that oversees provision of family planning services to a whole district. The district staff consists of a family planning district officer, public health nurses, an auxiliary health worker (a paramedical), auxiliary nurse midwives, and a health aide. The district office does little clinical work, concentrating instead on the administration of the program.

A FP/MCH center provides a FP/MCH clinic to serve primarily the surrounding population. All paramedicals perform both MCH and FP activities. If a public health nurse is present, in addition to running the MCH program, she will insert IUDs and distribute pills. The auxiliary nurse midwives and the auxiliary health workers also work in MCH but lack the public health nurses' degree of competence. Primarily these paramedicals run the family planning clinics, prescribe pills, prepare patients for vasectomies and IUD insertions, distribute condoms, and do some home visiting.

The key worker in the program is the health aide, since he or she is the one who does most of the home visiting. Health aides are about age 20 and have eight years of schooling followed by six weeks of paramedical training. Building the program on health aides has several advantages: As local residents, they know local customs, leaders, and dialects. Recruits are available in numbers large enough to build a national program. Female health aides after several years of successful experience can be upgraded into auxiliary nurse midwives. Two major problems in using health aides are their lack of stature within Nepali society and their bashfulness, both consequences of their young age.

### Operations

Although the FP/MCH Project and the Department of Health are independent organizations, at the district level they coordinate activities closely. Department of Health doctors perform vasectomies and insert IUDs. Department of Health facilities are often sites for family planning centers. For the few hospital deliveries, family planning staff run a postpartum program. Coordination is at times difficult. District family planning officers resent the possessive attitude of many doctors toward family planning. Occasionally district doctors become jealous of family planning's greater resources.

Incentives are provided only to doctors in Nepal (for vasectomies doctors receive the equivalent of US$2.00 and for IUDs the equivalent of US$0.50). The Indian program's provision of incentives to patients and motivators affects operations in Nepal only along the border, where villagers find it advantageous to cross into India. Program officials decided not to provide incentives in Nepal because they felt a client should come for the family planning service, not for the incentive. The Seminar on Population and Development recommended consideration of financial incentives for referrals, for qualified nurses inserting IUDs, for vasectomy acceptors, and for women aged 35 who have one or two children and accept a contraceptive method. How-

ever, because the funds for this would have to come from HMG, not foreign aid, there is little chance for acceptance.

Unique to family planning in Nepal is the considerable use of helicopters and STOL (Short Take Off and Landing) aircraft. Because of the mountains and the absence of roads, air support is often the only way to avoid treks of several weeks. By utilizing such services, personnel from Kathmandu keep track of district operations, supply the district offices, and answer special needs by, for example, establishing vasectomy camps.

*Methods.* Five contraceptive methods are approved by the FP/MCH Board: vasectomy, tubectomy, IUD, pill, and condom. Of these, tubectomy and IUD insertion are not frequent because of the lack of female staff to perform them. Vasectomy is so popular in Nepal that in many villages "family planning" is synonymous with "vasectomy."

Vasectomy camps are an important part of the program. Most areas of Nepal are at least several days travel from family planning services. However, these areas can request a vasectomy camp if they promise 100 clients. (Seldom do even close to 100 patients actually show. Often for publicity purposes arrangements are made to run a camp when few patients are expected, so that the people in the area will learn about family planning.) Transport to these areas is often difficult, occasionally necessitating helicopter lifts of people and supplies. Vasectomy teams include a doctor plus an assistant or two. Sometimes the medical team is preceded by a publicity man who takes along posters, pamphlets, a loudspeaker, a movie projector, and a generator. The FPA runs a few camps a year. The FP/MCH Project with its 25 district offices runs about 50 a year.

The oral contraceptive is also popular. To receive a prescription a woman must answer seven simple questions asked by a paramedical. If her responses are negative she is supplied free pills at any family planning or Health Department clinic. If she responds "yes" to one or more of the questions, the couple is encouraged to use another method. If the woman still prefers to try the pill she is referred to a doctor for prescription. The questions are as follows:

1. Is the woman who will take the pills presently seriously ill?
2. Has she ever had hepatitis?
3. Does she have swelling of the feet or ankles or shortness of breath?
4. Does she have redness or swelling in her leg veins?
5. Does she have severe headaches?
6. Does she have lumps in her breasts?
7. Does she have irregular or abnormal menstruation?

The number of cycles distributed at a time is left to each worker's discretion. One or two cycles are recommended; however, if the client has walked for many days to the clinic she may be given six or even more cycles. Women may also purchase cycles of orals at designated shops and pharmacies. At the shops, pills are sold at a subsidized price equivalent to US$0.05 per monthly cycle.

Condoms are widely distributed in Nepal. They are available free at family planning and Health Department facilities and are sold by designated shops at a subsidized price equivalent to US$0.05 per dozen.

A pilot project has begun in Kathmandu Valley to test long-term steroid injections for women. Discussions are under way for extending the project to some district centers.

### Education and Information

Diffusion of family planning messages among groups is difficult. Distinguishing Nepalis by ethnic group (and within ethnic groups by caste) sometimes encumbers the delivery of family planning services. Although no corroborating research has been done yet in Nepal, it seems people are more receptive to family planning when it is done by a worker from their own ethnic group. A worker from a differing ethnic group often has trouble becoming accepted, and—depending upon the ethnic groups being matched—may encounter hostility. (This last is particularly a problem in dealing with the Tharus of the Terai and the more primitive peoples generally.)

Three major population education programs exist in Nepal, each aimed at a different audience. For politicians and opinion makers, family planning staff personally contact, work with, and, they hope, win over community leaders to family planning. Community leaders are also reached through newspapers, radio, seminars, and a monthly magazine.

The second program, for Nepali parents, employs mass media and personal contacts. Radio is the most important mass medium used in this program. Although only one radio exists per 300 members of the population, the audience available at a given time is greater than with other media. A continuing survey assists radio programing by providing a profile of radio listening habits. Family planning films are also proving effective, especially in isolated areas where the people do not normally see films.

Mass media, however, only supplement the personal contacts of family planning staff with the general population. As a preliminary to home visiting, couples in a locality are surveyed to determine the need for family planning. Once priority couples are identified, individualized motivational work through home visiting begins.

The third population education program, for children, is in the Ministry of Education, to be discussed in a later section.

*Budget.* The operating budget of the FP/MCH Project for fiscal year 1971 (July 1970–June 1971) is $688,800. Of this, roughly 22 percent is spent on salaries; 8 percent on allowances; 8 percent on building rentals; 11 percent on expendable goods, such as office supplies, clothes, and food grains; 18 percent on durable goods, such as furniture, vehicles, machinery; and 23 percent on building construction and improvement. The Agency for International Development (AID) supplied 76 percent of the budget in FY1971. Their contribution is declining, for HMG accepts an increasing proportion of the family planning budget every year.

The FPA budget for calendar year 1971 is $34,630. This breaks down into the following general categories: 38 percent for salaries, 7 percent for allowances, 11 percent for building rental, 18 percent for expendable goods, 16 percent for durable goods, and 19 percent for lesser expenditures. IPPF supplies 98.5 percent of the FPA budget.



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### Research and Evaluation

Although a section in the FP/MCH Project is responsible for research and evaluation, to date it has spent most of its time setting up basic service statistics. The remaining time has been spent training district staff in record-keeping procedures. Now that data are coming in, the section is beginning evaluation of pill acceptor continuation rates and of the effectiveness of MCH both by itself and as an assistance to family planning.

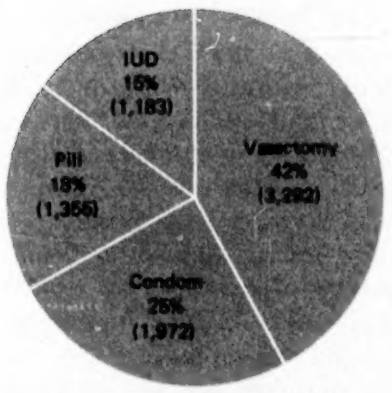
Separate from the Research and Evaluation Section, the Education Section of the project is conducting several analytical programs. They are monitoring radio listening habits and conducting simple tests of the effectiveness of films and other media in motivating family planning acceptance. A research project was conducted to determine the possible usefulness of mass mailings to motivate family planning acceptance. The conclusion was that mass mailings did not significantly motivate acceptance, either when coordinated with a home visiting program or when run separately.

### Commercial Distribution

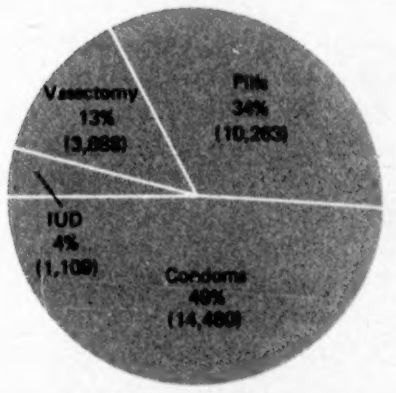
Shops designated by the FP/MCH Project sell pills and condoms at subsidized rates. Rudimentary screening is attempted through asking the female client the seven questions to see whether contraindications exist. Many nondesignated pharmacies also deal in contraceptives at nonsubsidized rates. Since prescriptions are not required in Nepal, women sometimes buy oral contraceptives from these pharmacies without a screening for contraindications.

### Other Efforts

Other population-related activity is limited to the Ministry of Education program to include population education in reforms of secondary school science. This reform includes: rewriting of curricula, in-service training of teachers, production of materials, examination reform, decreasing the number of pupils per class, and improving classroom facilities. The following population-related units have been developed: ecology in the sixth class; nutrition and malaria in seventh class; communicable diseases and waste, water supply, and public health in eighth class; soil erosion and conservation in ninth class; human physiology, species and environment, interaction of life, dynamics of population growth, and consequences of population growth for Nepal in tenth class. This program conflicts somewhat with the *New Education Plan;* hence there is the unfortunate possibility that it may be discontinued.



1968 - 1969



1969 - 1970

A population education game supplements these units and is being distributed outside as well as within the school system. This game simulates the decision making process for a Nepali farmer in allocating his limited resources among a series of desirable investments in such areas as agriculture, health, education, and family planning.

### Achievements

New acceptors of family planning in Nepal totaled 82,000 through August 1971. This figure includes all acceptors processed by both the FP/MCH Project and the FPA. Several thousand additional acceptors probably used the undocumented commercial channels. Total acceptors can be broken down by method as follows: 9 percent IUD, 17 percent vasectomy, 32 percent pill, and 42 percent condom. These figures are somewhat misleading since condoms are typically over-reported. Persons coming in for resupply are frequently counted as new acceptors. In addition, the opening of 25 district offices in the beginning of 1970 permitted much easier distribution of pills and condoms and changed considerably the balance of methods being accepted. Similarly, a reduction of emphasis on vasectomy camps beginning in 1970 caused vasectomy acceptors to level off between 3,000 and 4,000 per year while pills and condoms increased in popularity. The two pie charts illustrate the importance of these shifts.

The vasectomy acceptor's profile shows his mean age to be 38 and his spouse's to be 32. Twenty-five percent are illiterate. The average number of living children per acceptor is five. If he is from Kathmandu, he has 4.5 children, from the Terai 5.0 and from the hills, 5.3.

The IUD acceptor's profile shows her mean age to be 30 and her husband's to be 36. Seventy-six percent are illiterate. The average number of living children per acceptor is four. If she is from Kathmandu, she has 3.5 children; from Terai 4, and from the hills 5. Seventy-seven percent of IUD acceptors say they do not want another child.

The pill acceptor's profile shows her mean age to be 30 and her husband's to be 35. Sixty-nine percent are illiterate. The average number of living children per acceptor is 3.4. If she is from Kathmandu, she has 3.3 children, from the Terai 3.3, and from the hills, 3.7. Fifty-two percent say they do not want another child.

Statistics on illiteracy are misleading here. For vasectomy, they are based on men, for other methods on women. At face value, the statistics imply families accepting vasectomy are more literate than those accepting other methods. Probably five times as many men as women are literate.

### Foreign Assistance

Foreign assistance to family planning in Nepal has come mainly from four sources, the Agency for International Development (USAID), the International Planned Parenthood Federation (IPPF), the United Nations Children's Fund (UNICEF), and the World Health Organization (WHO).

Through coordination of their programs, the agencies each support a different aspect of the family planning effort. In earlier years, contraceptive assistance came from the Swedish International Development Agency (SIDA).

### U.S. Agency for International Development

USAID began assistance in 1966. Its objective has been to build an organization capable of dealing with population problems in Nepal. Since 1966, the number of full-time advisors working with the FP/MCH Project has increased from one to seven, and financial aid supplied has increased from $12,666 per year to $590,015. Much of the funding goes to the soft costs of organizational support, the major exception being support in building the Central Project Headquarters. AID advisory assistants work with FP/MCH Project staff in various fields. In addition to financial and advisory assistance, USAID supplies contraceptives, audio-visual equipment, teaching equipment, and air support.

### International Planned Parenthood Federation

The FPA has been from its inception dependent upon IPPF financial assistance. (IPPF currently supplies 98.5 percent of the budget.) Other assistance includes several vehicles, office equipment, and contraceptives. IPPF supplies no permanent advisory assistance, but has occasionally sent a short-term advisor for specific tasks, such as making a family planning film.

### UNICEF and WHO

UNICEF and WHO were the first foreign agencies to assist the FP/MCH Project. Both organizations support just the MCH side of the program. Since 1964, UNICEF has provided most of the drugs used, all the milk, and much of the laboratory and clinic equipment. WHO provided one full-time advisor to the FP/MCH Project from 1963 to 1966. Since then WHO advisors assigned to other programs in the Ministry of Health have periodically coordinated their services with specific needs of the FP/MCH Project.

## Strengths and Weaknesses

Dominant among the strengths of the family planning program in Nepal is its general ability to fit technical problems to Nepali conditions. Examples of this are the combining of MCH services with family planning, the emphasis on paramedicals in the absence of doctors, the liberal pill-distribution policy requiring only paramedical screening, the use of all available means of transportation ranging from long-distance walking to air support, and the comprehensive educational and motivational program.

Against these advantages, however, are a number of weaknesses. One is the friction that sometimes arises between nonmedical and medical personnel. A second is the poor condition of supporting infrastructures for family planning. These include the approximately 400 doctors in the country, the few health posts and centers, the mountainous terrain, the absence of roads, and the less than 10 percent literacy. A third weakness is the overdependence on foreign assistance, illustrated by 98.5 percent of the FPA's budget coming from IPPF and 76 percent of the FP/MCH Project's budget coming from USAID, though in the latter case, the percentage is decreasing.

Nonetheless, overriding these problems is a growing and genuine realization among those involved that Nepal's population problem is indeed serious and already affecting the country. The Nepali bureaucracy is experimenting with creative approaches and is effectively implementing new ideas to develop a national program capable of reducing fertility in Nepal.

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